

# Wisconsin Bald Eagle and Osprey Surveys 2005

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## **Acknowledgments**

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Bald eagle data from 1973 to 1989 was summarized from the annual bald eagle survey flights of Charles Sindelar. Special thanks go to Dave Evans, Rex Runke, Madison Audubon, Bill Stout, Patrick Ready, and Wildlife Management staff for conducting ground observations.

## **Summary**

DNR Wildlife Management staff conducted breeding survey flights using DNR pilots and aircraft. U.S. Fish & Wildlife Service pilots surveyed certain nests along the Upper Mississippi Fish & Wildlife Refuge. The first eagle flight was flown in early April to locate active nests and the second eagle flight was flown in June to count young. The first osprey flight was flown in mid May to locate active nests and the second osprey flight was flown in mid July to count young. Ground observations by volunteers and banders supplemented the aerial checks. Regional reports that detailed all eagle and osprey nest locations and summarized eagle and osprey productivity by county were developed. These reports are on file at the Bureau of Endangered Resources' Natural Heritage Inventory in Madison.

DNR staff and volunteer rehabilitators collected dead and injured eagles. Dead birds were necropsied by DNR Wildlife Management Staff Veterinarians in Madison. Local licensed rehabilitators treated injured birds. Some severely injured birds were shipped to The Raptor Center at the University of Minnesota at St. Paul. Eagle carcasses were sent to the National Eagle Repository at Rocky Mountain Arsenal National Wildlife Refuge near Denver, Colorado. From this repository eagle feathers and carcasses were sent on request to Native Americans for religious purposes.

Throughout the state, DNR staff contacted private landowners to protect eagle nests from disturbance. On public properties all nests are fully protected from disturbances and habitat is managed to promote large, supercanopy white pines.

## **Bald Eagles**

There were 1,020 eagle nest territories occupied by breeding adults in 2005. This was an increase of 28 pairs from 2004. Occupied means the observer recorded one or more of the following: incubation, eggs, young, or a repaired nest. Eagles nested in 58 of the state's 72 counties (Figure 1). At least 1,188 young were observed in 702 nests in 2005. The 702 nests with known outcomes had an average 1.22 young per occupied territory and 1.69 young per successful territory. Nest success was 72%. Table 1 provides a regional summary of productivity and success. The increase in eagle territories was distributed across their range in Wisconsin but the increase was largest in Burnett, Crawford, and Vilas Counties. Two pairs of eagles now nest in Green County in far southern Wisconsin.

The inland lakes region of northwest and north central Wisconsin held 70% of the state's breeding population of bald eagles. Statewide, the number of young produced in 2005 is at the level needed for the eagle population to continue its overall rate of growth and expansion.

## **Winter Surveys**

Each January an aerial survey of wintering eagles is flown on the lower Wisconsin River from the Petenwell Dam in Adams County to Prairie du Chien in Crawford County. The five-year average is 264 eagles observed along the river corridor. The 2004 count was 614 eagles, the 2005 count was 117 eagles, and the 2006 count was 244 eagles (154 adults and 90 immatures). There were warmer temperatures and more open water along the lower stretches of the river in 2005-2006. This allowed eagles to spread out in the river valley and not concentrate near the river corridor.

## **Eagle Deaths & Injuries in Wisconsin**

DNR staff and volunteers recovered over 100 sick, injured, or dead eagles in 2005. The leading cause of death was being hit by a car. Most vehicle collisions occurred when eagles were scavenging car-killed deer. Other common causes of eagle mortality include lead poisoning, electrocution, eagle versus eagle territorial fights, and unspecified wing injuries.

## **Eagle Translocation**

Four young eagles were taken from nests in northwestern Wisconsin and transferred to the Hudson River in New York City. This is a project sponsored by various agencies and conservation groups and coordinated by the New York City Park Rangers. Since 1975, 215 Wisconsin eaglets have been transferred to six different eastern states for reintroduction. Today, Wisconsin eagles and their descendants live in all these six states.

## **Osprey**

There were 431 osprey nest territories occupied by breeding adults in 2005. This is a decrease of 6 pairs from 2004. These 431 pairs of osprey produced 547 young with 1.26 young per occupied nest, 1.94 young per successful nest, and 65% nest success (Table 2).

Nesting pairs of osprey increased in central and east central Wisconsin (Adams, Juneau, Outagamie, and Winnebago Counties), but decreased in west central (Jackson and Monroe Counties) and in north central Wisconsin (Iron, Oneida, and Vilas Counties). See Figure 2. Northwest and north central Wisconsin osprey nest success and productivity were well below

other regions of Wisconsin (Table 2). Northwest and north central Wisconsin osprey share their northern lake and flowage nests with a dense population of breeding bald eagles. For example, Oneida County has 75 pairs of osprey and 118 pairs of bald eagles.

The Big Muskego Lake osprey program in Waukesha County found success in 2005. One pair of osprey nested just west on the lake and another pair nested just east of the lake. Both pairs successfully fledged young. Osprey are a welcome addition to the avifauna of far southeastern Wisconsin.

Since 1993, the statewide osprey population averaged 397 pairs (ranging from 364 to 437 pairs). In the last three years the statewide osprey population was 405, 437, and 431 pairs (Figure 4).

Electric transmission lines have become a common nest site for osprey. Various power and transmission companies continue to provide secure nest sites through installation of osprey platforms on power line poles. For example, 22 of the 49 active osprey nests in Central Wisconsin (Table 2) nested on electric transmission line poles in 2005.

The osprey remains listed as a Wisconsin State Threatened Species. Their overall population is less than half that of the statewide eagle population. Ospreys nested in 45 of the state's 72 counties.

### **Osprey Platforms**

DNR Wildlife Biologists erected over 200 osprey nest platforms between 1972 and 1993. Osprey nest on these platforms and the platforms provide a secure nest site. Since 1993, various conservation organizations and power companies erected additional nest platforms on power lines and other structures. In 2005, nest platforms were erected by the Wisconsin Public Service Corporation, the American Transmission Company, WE Energies, DNR, and various conservation groups. About 75% of the state's breeding osprey population nest on platforms.

### **Osprey Translocation**

Wisconsin entered the tenth year of the osprey translocation project. Twenty osprey young were taken from nests in northwest Wisconsin and sent to four hack sites in Iowa. The birds were taken from nests with multiple young. One young was always left in the nest. The osprey young were given health exams at The Raptor Center in St. Paul before shipment to Iowa. Iowa had their first osprey nest in 2003, their first osprey young in 2004, and had three active nests in 2005.

### **Natural Heritage Inventory**

The detailed locations of over 1,100 known eagle nests and over 400 known osprey nests are on file with Wisconsin's Natural Heritage Inventory (NHI) in the Bureau of Endangered Resources. The NHI is the repository for all information on Wisconsin's threatened and endangered species. It also tracks rare species and species of special concern. The NHI is used to screen all land use activities that require a state or federal permit and is the primary mechanism used to protect eagle and osprey nests.

**Table 1.** *Summary of the 2005 Bald Eagle Survey in Wisconsin.*

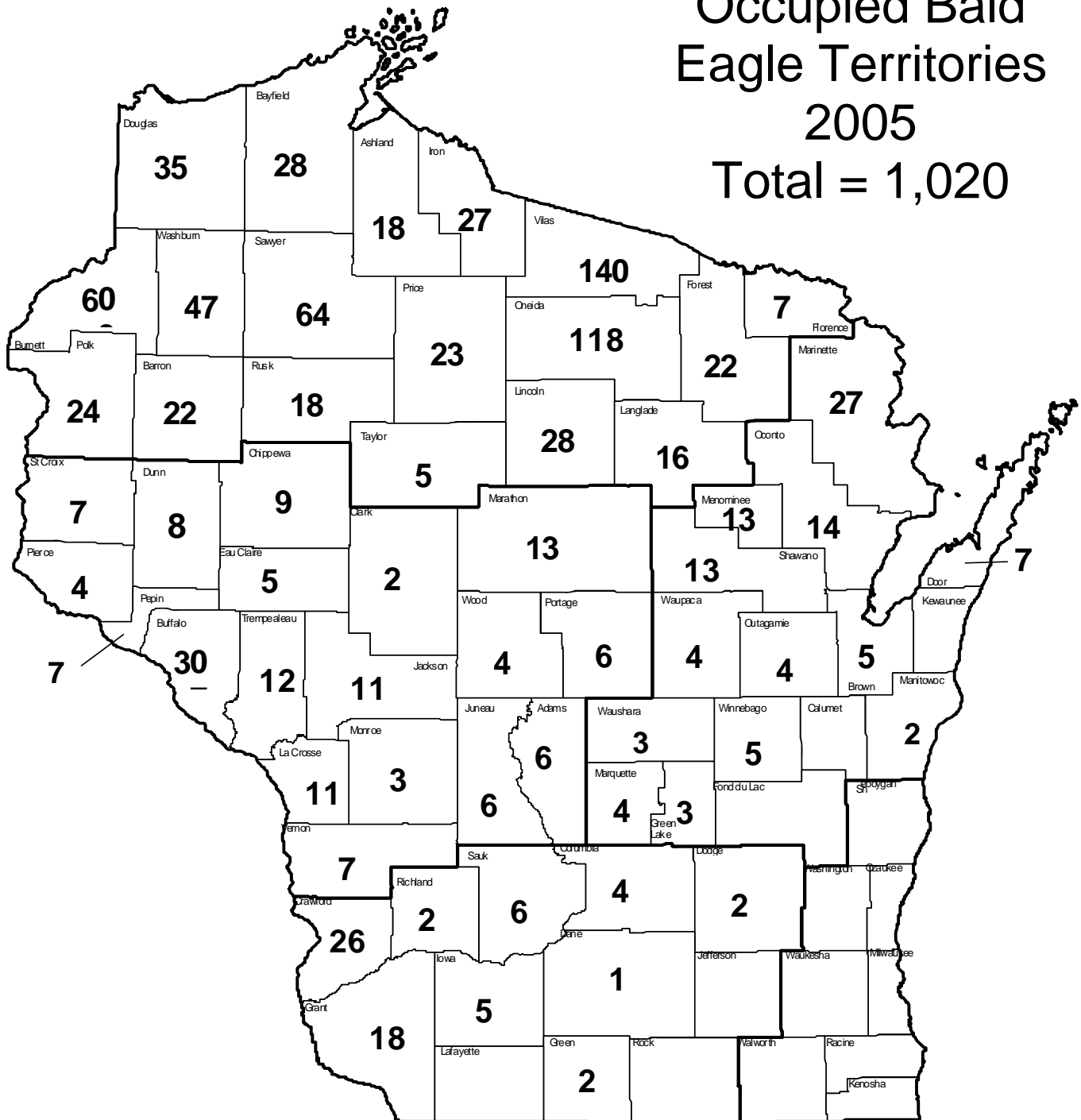
| Locality in Wisconsin | Occupied Territories | Successful Territories | Total Young  | Young Per Occupied | Young Per Successful | Percent Nest Success |
|-----------------------|----------------------|------------------------|--------------|--------------------|----------------------|----------------------|
| Northwest             | 363                  | 270                    | 443          | 1.22               | 1.64                 | 74                   |
| North Central         | 324                  | 208                    | 334          | 1.03               | 1.60                 | 64                   |
| NE & East             | 109                  | 82                     | 155          | 1.42               | 1.89                 | 75                   |
| Central               | 35                   | 24                     | 46           | 1.31               | 1.92                 | 68                   |
| West Central          | 102                  | 87                     | 142          | 1.39               | 1.63                 | 85                   |
| Southern              | 36                   | 31                     | 68           | 1.89               | 2.19                 | 86                   |
| <b>Subtotal</b>       | <b>969</b>           | <b>702</b>             | <b>1,188</b> | <b>1.22</b>        | <b>1.69</b>          | <b>72</b>            |
| Miscellaneous*        | 51                   |                        |              |                    |                      |                      |
| <b>Total</b>          | <b>1,020</b>         |                        |              |                    |                      |                      |

\*There were some occupied territories in Ashland, Chippewa, Crawford, Eau Claire, and Grant Counties where the outcome could not be determined.

**Table 2.** *Summary of the 2005 Osprey Survey in Wisconsin.*

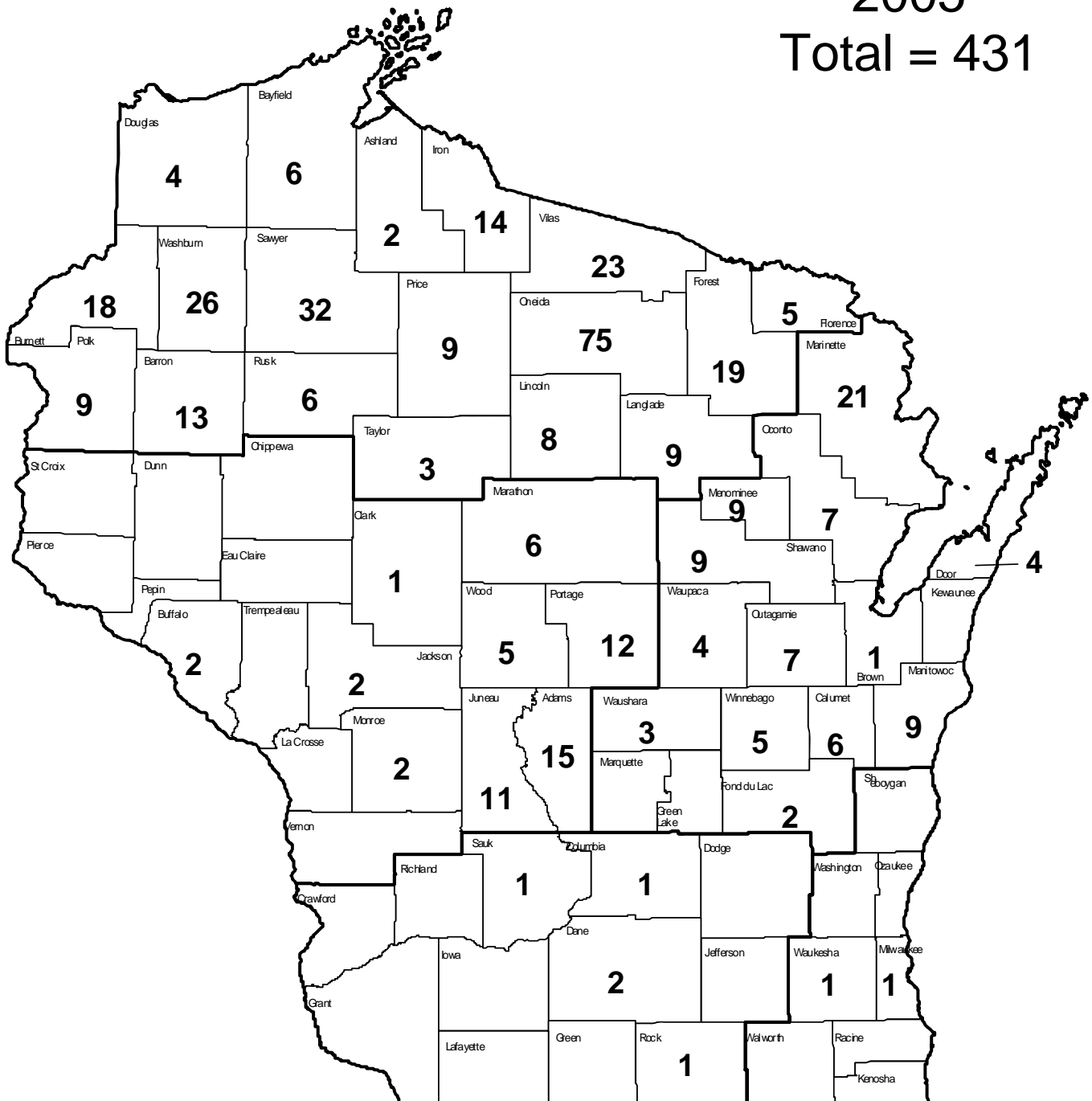
| Locality in Wisconsin | Occupied Territories | Successful Territories | Total Young | Young Per Occupied | Young Per Successful | Percent Nest Success |
|-----------------------|----------------------|------------------------|-------------|--------------------|----------------------|----------------------|
| Northwest             | 142                  | 79                     | 156         | 1.09               | 1.97                 | 56                   |
| North Central         | 134                  | 86                     | 142         | 1.06               | 1.65                 | 64                   |
| NE & East             | 92                   | 68                     | 150         | 1.63               | 2.20                 | 74                   |
| Central               | 49                   | 37                     | 78          | 1.59               | 2.10                 | 75                   |
| West Central          | 7                    | 6                      | 10          | 1.42               | 1.67                 | 85                   |
| Southern              | 5                    | 3                      | 7           | 1.40               | 2.33                 | 60                   |
| Southeast             | 2                    | 2                      | 4           | 2.00               | 2.00                 | 100                  |
| <b>Total</b>          | <b>431</b>           | <b>281</b>             | <b>547</b>  | <b>1.26</b>        | <b>1.94</b>          | <b>65</b>            |

Total = 1,020



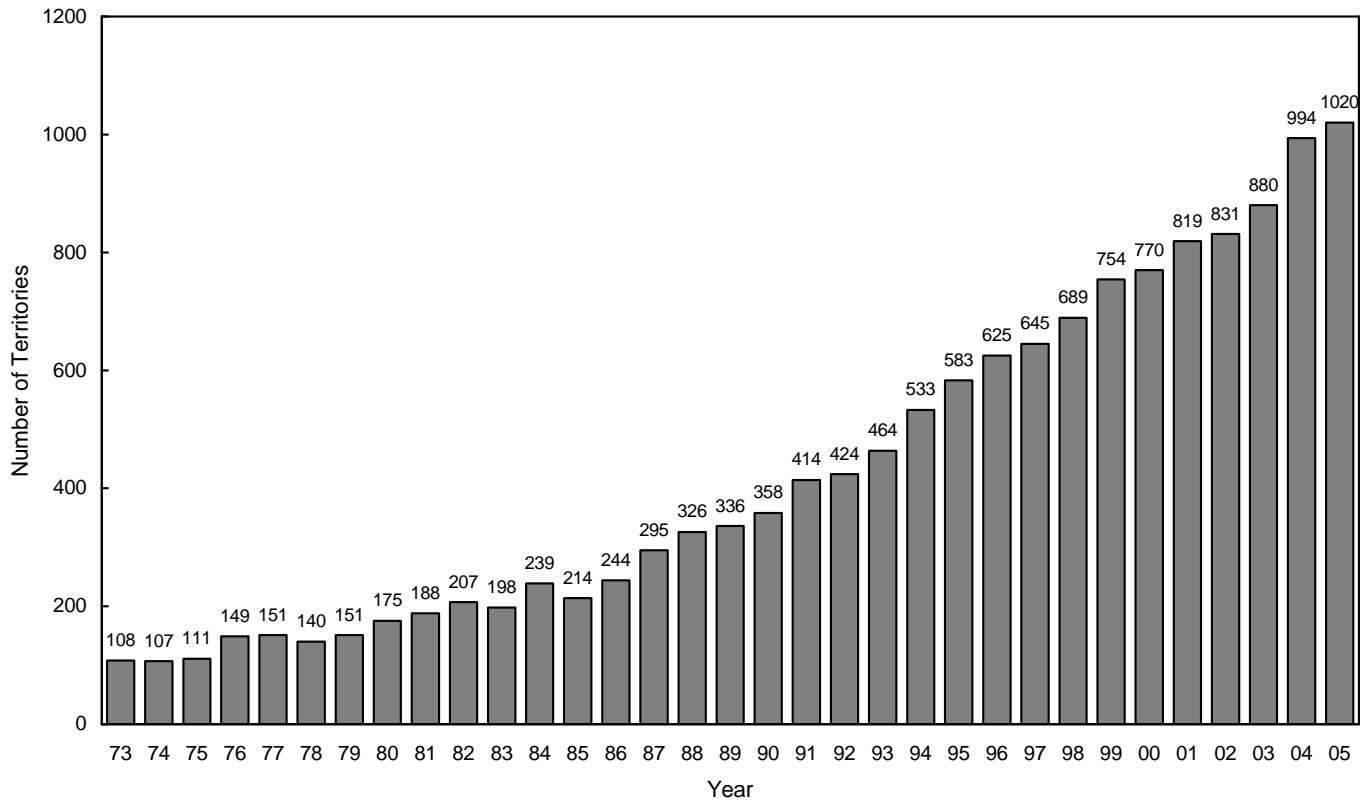
**Figure 1.** Occupied eagle territories are those territories where the observer recorded at least one of the following: a repaired nest, an incubating adult, eggs, or young in the nest.

# Active Osprey Territories 2005 Total = 431



# WISCONSIN EAGLE NEST SURVEY, 1973 - 2005

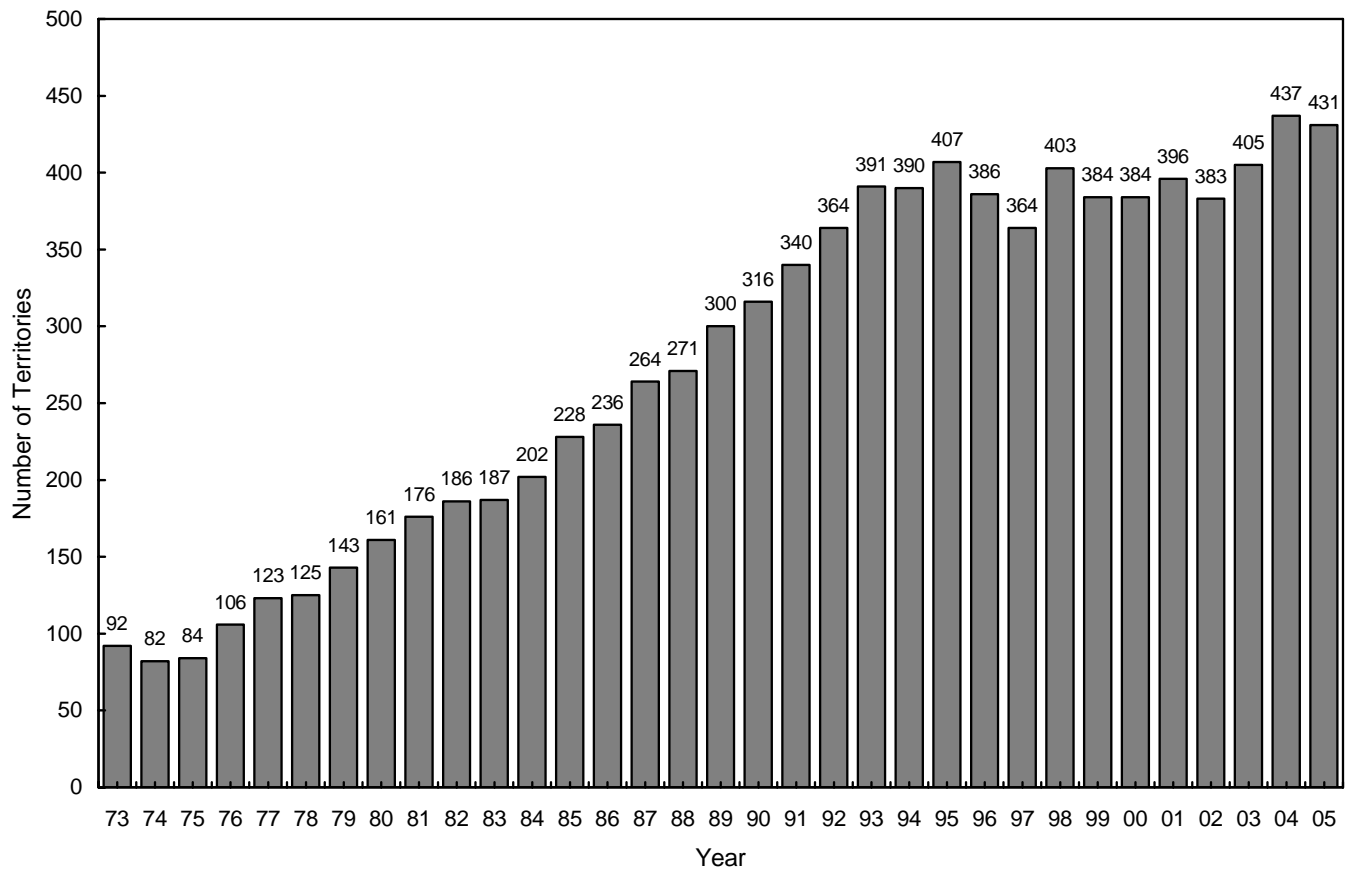
Occupied Territories



**Figure 3.** *Number of occupied eagle territories, 1973-2005.*

# WISCONSIN OSPREY NEST SURVEY, 1973 - 2005

Active Territories



**Figure 4.** *Number of active osprey territories, 1973-2005.*